

Monthly Status Report: UCSF, ICR, Ajay N. Jain

Integrated Cancer Research Workspace

March 2005

1. Statement of Progress

Primary project management effort by Dr. Jain related to aspects of contract administration. In addition, UCSF participated by attending teleconference meetings in the ICR Workspace, in particular the Data Analysis and Statistical Methods, Pathways, and Microarray SIGs (Jain, Kingsley, Novak, Tokuyasu). Specific efforts in the Magellan project involved direct collaboration with Adopters at UPenn to develop test approach and other documents. For the QPACA project, effort was focused on adoption in the near term. These projects also saw specific effort to support integration-related tasks.

2. Progress Description

The following details our progress in our two ICR developer projects (Magellan and QPACA). Implicit in the descriptions for each is general participation in the ICR Workspace. Note that participation in the Array SIG is listed under the Magellan project, due to the integration tasks required with caArray.

Magellan

Task 1: Project Management

Major Accomplishments:

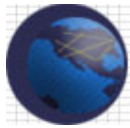
- Moderated the March 4, 2005 Data Analysis and Statistical Tools Meeting. This included setting the agenda and booking speakers. In this meeting, Chris also presented work on the aCGH package and its integration in Magellan. (Kingsley)
- Attended the 03/02/05 Microarray SIG teleconference. (Tokuyasu)

Activities Planned for next month

- Continue meeting attendance. (All)
- Attend caBIG Annual Meeting in Bethesda. (Jain and Kingsley)

Task 2: Project Activities

Major Accomplishments:



- Received feedback from adopters on aspects of Magellan's data display capabilities (primarily from Craig Street and Vishal Nayak), and implemented several suggestions / bug fixes. (Kingsley)
- As a result of my presentation of March 4th data analysis meeting, I began preliminary talks with Ping Liang on incorporating some of their CGH and LOH applications into Magellan.
- Re-wrote sections of the Magellan data projection code to improve the readability and reliability. (Kingsley)
- Set up a central JSP error page for Magellan, to which Java exceptions are passed. This allows for all relevant errors to be handled and for information about the exception to be printed to the web browser, rather than to stdout logs. Compiled Java classes in Magellan (especially those that involve SQL queries) will be modified to take advantage of this functionality. (Kingsley)
- Began development of Test Approach document. (Kingsley, Jain).

Activities Planned for next month

- Work with Adopters on Test Approach document and address the Magellan caBIO interoperability assessment.
- Work with Adopters on Test Approach document and address the Magellan caBIO interoperability assessment.

QPACA

Task 1: Project Management

Major Accomplishments:

- March 10 - Attended pathway SIG meeting. (Novak)

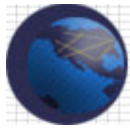
Activities Planned for next month

- Continue meeting attendance. (All)
- Formalize contact with Adopters and begin scheduling joint work. (Jain and Novak)
- Attend caBIG National meeting in Bethesda (Jain and Novak)

Task 2: Project Activities

Major Accomplishments:

- Continued integrating QPACA with Magellan, specifically including both computational and visual analysis capabilities as Analysis Pages in Magellan.



This addresses aspects of Tasks 2.3 and 2.4. The easiest way to provide access to Adopters for QPACA is to quickly integrate with Magellan. (Novak and Jain)

- Continued testing of QPACA algorithms on multiple data sets. Publication submitted to Nucleic Acids Research describing QPACA application to yeast and human data sets. Addresses aspects of Tasks 2.2 and 2.3. (Novak, Jain).

Activities Planned for next month

- Completion of initial connectivity with Magellan to facilitate adoption.
- Formal adoption including training personnel at Adopter site.

3. Issues and Risks

We identified no relevant issues or risks to report in this section for this period.

4. Meeting notes

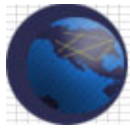
The following summarizes meeting notes for February and March:

Meeting notes: February

- Numerous informal meetings lead to choices for servers and timeline for setting up a Magellan instance for adoption by UPenn. Issues regarding static IP addresses and firewall considerations are brought up and addressed.
- Numerous informal meetings on QPACA focus on two things: 1) validation of gene set recognition algorithm, and 2) implementation of a generalized event node that will be capable of representing the space of relationships we expect to see from the BioPAX standard.
- February 25: Lab meeting. Chris discusses plans and progress for UPenn adoption of Magellan. Barbara formalizes plan for integration of QPACA with Magellan to both facilitate adoption of QPACA by OHSU as well as address an explicit deliverable for the QPACA project.

Meeting notes: March

- March 14: Jain, Tokuyasu, Kimura met to discuss requirements for local installation of caArray in order to facilitate integration with Magellan. Key issue: requirement for additional memory on two Linux servers. We identified funds to make the upgrade.
- March 16: Jain, Kingsley, Novak, McMahon Lab: Met to discuss application of Magellan and QPACA on pancreatic cell line data set. Magellan results were presented, demonstrating excellent reproducibility in the triplicate Affy data.



Gene sets representing significant difference between cancer and normals, treated cancers versus untreated, were derived and the significance was assessed using maxT. Magellan identified a clear overabundance of cell-cycle related genes. We discussed plans for confirmation of a subset of the genes with PCR-based methods. Barbara plans to run QPACA on the same set.

Submitted by:

Signature

4-27-2005
Date

Ajay N. Jain
Name (please print)

Associate Professor, Cancer Research Institute, University of California, San Francisco
Title/Organization